

# Smooth & Cleanable Surfaces



by  
Chris Callahan  
Andy Chamberlin



## Finish Surfaces for Produce and Food Areas

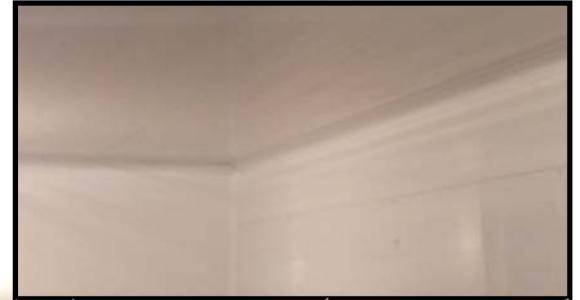
Smooth and cleanable surfaces are an important aspect of areas where produce is washed, packed, stored and processed. Many farms are investing in renovations and expansions of these areas and are seeking materials to meet this “finish surface” need regardless of specific regulation. Meanwhile, food processing companies are often required to incorporate these materials due to regulation. This is a summary of some of the finish surface materials that are available, their pros, cons and pricing at this time.

### Notes:

- These are not necessarily compliant for food contact surfaces; they are meant to be finish materials for areas where food is being washed, packed or stored. The general guidance is “smooth and cleanable.” Check with the appropriate local and/or state enforcement agency to confirm applicability to your project.
- The prices listed are material cost only. The products differ in with regard to installation labor. For example, flexible sheathing like FRP will require some sort of rigid wall material to mount to where as rigid panels such as Trusscore, Extrutech and Utilite can be installed on top of furring strips. No installation costs have been captured in the prices listed.
- Links to manufacturer info are included. Most manufacturers sell via distribution channels. Check with your local building supply company for availability and current pricing. As with most materials, higher volume purchasing generally results in lower unit costs.



*This cooler space was finished with Trusscore PVC panels resulting in a smooth, cleanable surface.*



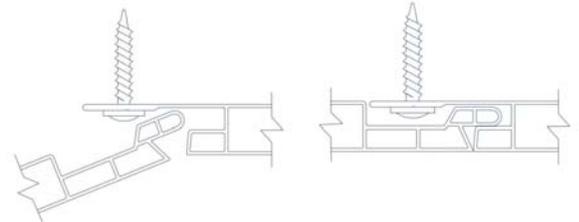
*A properly outfitted cooler results in a clean install both visually, and physically. Note the use of trim pieces to close gaps at corners.*

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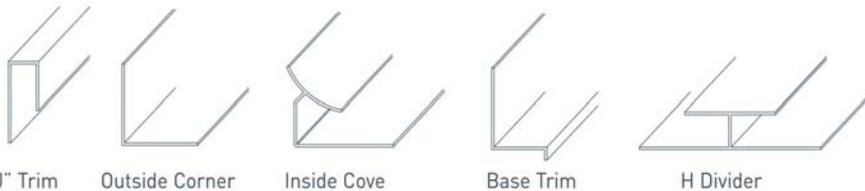
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Notes (continued):

- The pricing on these materials is quite variable depending on the source, when you obtain a quote, the quantity being ordered and how it is delivered. The listed price is the best information available at the time of writing. Shop around and obtain quotes from several distributors.
- Most manufacturer webpages include an easy to find, specific, installation guide for their product that will be helpful in guiding installation.



Several manufacturer's use panel locking mechanisms such as the tongue and groove system found in Trusscore. This provides for a smooth finish and hides the fasteners.



"J" Trim    Outside Corner    Inside Cove    Base Trim    H Divider

Common shapes of available trim options to cover and seal all edges and seams. This keeps water from seeping behind the finish surface and entering the walls which can lead to molds and mildews and structural damage.

The UVM Ag Engineering website will be updated as new materials become available. Please check the site for current info. If you know of a material that should be included, please let us know.

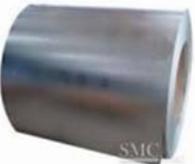
- FRP panels use H or J channel trim between pieces and corners which are calked in place to ensure a moisture proof seam. Follow the manufactures installation procedures.



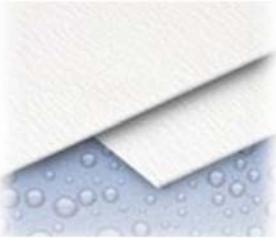
Ribcore 3' or 9' rib pattern options for ceilings

Visit the Ag Engineering website for more helpful engineering information pertaining to farms. <http://go.uvm.edu/ageng>

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| Material                                                                                                                                                 | Description                                                                                                                | Pros                                                                                                                                                                                                                                        | Cons                                                                                                                                            | Material Cost (\$/ft <sup>2</sup> ) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <u>Fiber Reinforced Plastic (FRP)</u><br><br>Textured – Class C<br><br> | Fiberglass-based wall sheathing material. Dimpled or textured surface.                                                     | Very common and familiar to trades and suppliers.<br><br>Can be installed with rivets or with adhesive.<br><br>Wide array of trim pieces to aid in clean installation.                                                                      | Requires a backer board to install.<br><br>Drilled and riveted installations can allow moisture and water leakage into wall. Consider adhesive. | \$1.03                              |
| <u>Fiber Reinforced Plastic (FRP)</u><br><br>Smooth – Class C<br><br> | Fiberglass-based wall sheathing material. Smooth, flat surface.                                                            | Very common and familiar to trades and suppliers.<br><br>Can be installed with rivets or with adhesive.<br><br>Wide array of trim pieces to aid in clean installation.<br><br>Smooth surface is more appealing to some due to cleanability. | Requires a backer board to install.<br><br>Drilled and riveted installations can allow moisture and water leakage into wall. Consider adhesive. | \$1.92                              |
| <u>Galvalum Roofing – Ridged</u><br><br>                              | Painted, aluminum coated, galvanized steel sheets intended for roofing material but often used for wall sheathing as well. | Does not require a backing board, can be installed on furring.                                                                                                                                                                              |                                                                                                                                                 | \$0.95                              |
| <u>Galvalum Roofing – Flat</u><br><br>                                | Flat version of the ridged product above sheet galvalum sheathing. (see p.25 of linked manual)                             | Does not require a backing board, can be installed on furring. Flat surface may be easier to clean for some.                                                                                                                                |                                                                                                                                                 | \$0.76                              |

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| Material                                                                                                                                                              | Description                                                                        | Pros                                                                 | Cons                                                                                                                                        | Material Cost (\$/ft <sup>2</sup> ) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
|  <p><u>Trusscore Paneling</u></p>                                                     | PVC twin-wall plastic panels in 16" widths, and available in a variety of lengths. | Does not require a backing board, can be installed directly on studs |                                                                                                                                             | \$1.52                              |
| Find more info at: <a href="http://www.trusscore.ca">http://www.trusscore.ca</a> 1-888-418-4679                                                                       |                                                                                    |                                                                      |                                                                                                                                             |                                     |
|  <p><u>WallTuf Paneling</u></p>                                                      | Recycled PVC-based wall sheathing.                                                 | Considered more environmentally benign than FRP panels.              | Requires a backer board to install.<br>Drilled and riveted installations can allow moisture and water leakage into wall. Consider adhesive. | \$1.25                              |
| Find more info at: <a href="http://www.palramamericas.com/Products/Flat-Sheets/WALLTUF">http://www.palramamericas.com/Products/Flat-Sheets/WALLTUF</a> 1-610-285-9918 |                                                                                    |                                                                      |                                                                                                                                             |                                     |
|  <p><u>Extrutech Twinwall</u></p>                                                   | PVC twin-wall plastic panels                                                       | Does not require a backing board, can be installed on furring.       |                                                                                                                                             | \$2.20                              |
| Find more info at: <a href="http://www.epiplastics.com">http://www.epiplastics.com</a> 1-888-818-0118                                                                 |                                                                                    |                                                                      |                                                                                                                                             |                                     |
|  <p><u>Utilite Paneling</u></p>                                                     | Polypropylene twin-wall plastic panels                                             | Does not require a backing board, can be installed on furring.       |                                                                                                                                             | \$1.85                              |
| Find more info at: <a href="http://www.nudo.com/p_utilite_wall.php">http://www.nudo.com/p_utilite_wall.php</a> 800-826-4132                                           |                                                                                    |                                                                      |                                                                                                                                             |                                     |
|  <p><u>Ribcore</u></p>                                                              | PVC ribbed panels<br>Used for ceilings                                             | Will not rust or rot                                                 |                                                                                                                                             | \$0.77                              |
| Find more info at: <a href="http://www.ribcore.info">http://www.ribcore.info</a> 888 773-3130                                                                         |                                                                                    |                                                                      |                                                                                                                                             |                                     |